

Polyatomic Compounds

- Elements with polyatomic
- Polyatomic ions are made from more than one type of atom ex:  $\text{CO}_3^{-2}$  carbonate
- Groups of element (fixed ratio) with their own ionic charge.

USE YOUR Poly Sheet

- Names stay the same

ex: Sodium and Sulfate

$\text{Na}^+$        $(\text{SO}_4)^{-2}$   
 $\swarrow \quad \searrow$   
 $2 \quad 1$   
 $\text{Na}_2\text{SO}_4$   
 sodium sulfate

same

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$\text{Na}^+$        $\text{SO}_4^{-2}$   
 $\swarrow \quad \searrow$   
 $2 \quad 1$   
 $\text{Na}_2\text{SO}_4$   
 sodium sulfate

Calcium and Nitrate

$\text{Ca}^{+2}$        $(\text{NO}_3)^{-1}$   
 $\swarrow \quad \searrow$   
 $1 \quad 2$   
 $\text{Ca}(\text{NO}_3)_2$   
 Calcium nitrate

same

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# Naming!

## Molecular Compounds

### Writing a formula when given a name

- Identify the root names for elements that are on the periodic table (usually only the first syllable of the name)
- Write all symbols of elements in the order they are found in the name
- Identify the prefixes and write the corresponding number down low after the symbol (subscript) for that element

### Naming when given a formula

- First non-metal name remains the same
- Last non-metal name add -ide
- Use prefixes to indicate number of atoms of each type

### Prefixes:

Mono - one (not used for 1<sup>st</sup> element in compound)

Tri for three

Hexa for six

Nona for nine

Tetra for four

Hepta for seven

Deca for ten

Di for two

Penta for five

Octa for eight

Example:  $\text{CO}_2$  is carbon dioxide.  $\text{N}_2\text{O}_5$  is dinitrogen pentoxide.

Mono - 1

Penta - 5

Di - 2

Hexa - 6

Tri - 3

Hepta - 7

Tetra - 4

Octa - 8

ide  
endings.  
+  
Prefixes.

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## Molecular Compounds

- non metals with nonmetals

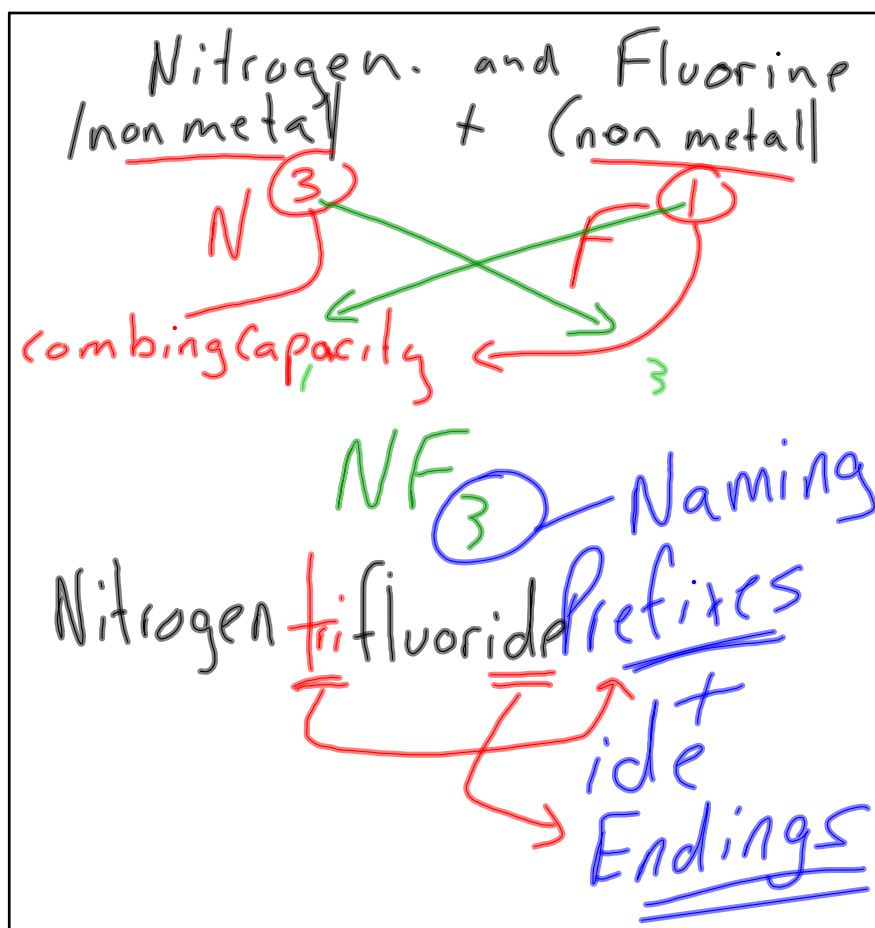
- Use Covalent Bonds

with Combining Capacity  
to create the connections  
in compounds

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Combining Capacity of Common Non Metal Atoms			
4	3	2	1
C	N	O	H
Si	P	S	F
	As	Se	Cl
			Br
			I

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Tru

- ① Silicon and Bromine
- ② Sulfur and Nitrogen
- ③ Carbon and Iodine

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